CLAIM SET AS AMENDED

1) (currently amended) ~~Method~~ A method for ~~use in~~ controlling an ~~the~~ emission power of a transceiver ~~(20)~~ ~~which~~ that is in communication with another transceiver ~~(10)~~ via a communication system, said method comprising: ~~including the steps of~~

measuring ~~the~~ an amplitude or ~~the~~ power of ~~the~~ a signal received by said transceiver ~~(20)~~; ~~and~~ ~~of~~

~~evaluating a power control command (*PC*) which is then used to command the emission power (*P*) of said transceiver according to said control command signal (*PC*),~~

~~wherein it includes the steps of~~ evaluating ~~the~~ a fast fading duration of the received signal based on ~~basis of~~ ~~said~~ the amplitude or power measurement; ~~and~~ ~~of~~

~~deducing the power control command (*PC*) from said fast fading duration~~

setting the power control command at the inverse of the measured amplitude if the fading duration is higher than a time duration between the amplitude or power measurement and the emission power setting and setting the power control command at the inverse of the average of the measured amplitude if the fading duration is equal to or lower than the time duration; and

controlling the emission power of said transceiver according to said power control command.

2) (currently amended) ~~Method~~ The method ~~for use in controlling the emission power~~ according to claim 1, ~~wherein it includes the steps of~~ further comprising the steps of:

comparing the evaluated fast fading duration with the time duration between the amplitude or the power measurement and the emission power setting[[,]]; and ~~in~~

determining said power control command ~~(PC)~~ according to the result of said comparison.

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3. (canceled)

4) (currently amended) ~~Method~~ The method ~~for use in controlling the emission power~~ according to claim 1, wherein said fading duration is evaluated by ~~means of~~ the following equation:

$$t_f = \begin{cases} (a) & \dfrac{\lambda}{\sqrt{2\pi L v}}\left[e^{(\overline{L})}-1\right] \quad if\ \overline{L} \prec 1 \\ (b) & \dfrac{\lambda}{\sqrt{2\pi L v}} \quad if\ \overline{L} \prec 1 \end{cases}$$

where $\overline{L}$ is the received amplitude L_m at a measurement time

normalized by ~~the~~ a short-term average amplitude L_{av} $(\overline{L} = L_m L_{av})$, v and λ are respectively the speed of the said transceiver ~~(20)~~ relative to the other transceiver ~~(10)~~ and the wavelength of the carrier used by the communication system.

5) (currently amended) ~~Method~~ The method ~~for use in controlling the emission power~~ according to claim 1, wherein said power control command signal ~~(*PC*)~~ is determined ~~given~~ by the following equation ~~scheme~~:

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$$PC(t_d) = \begin{cases} 1/L_m \begin{cases} if\ \overline{L} \prec 1\ and\ t_d \prec \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v}\left[e^{(\overline{L}^2)} - 1\right] \\ if\ \overline{L} \geq 1\ and\ t_d \prec \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v} \end{cases} \\ 1/L_{av} \begin{cases} if\ \overline{L} \prec 1\ and\ t_d \geq \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v}\left[e^{(\overline{L}^2)} - 1\right] \\ if\ \overline{L} \geq 1\ and\ t_d \geq \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v} \end{cases} \end{cases}$$

where $PC(t_d)$ is the power control command signal which will be used at the present time (assumed to zero) + t_d, L_m is the measured amplitude, L_{av} is the short-term average of the measured amplitude, t_d is the time delay between the moment of the measurement of the measured amplitude L_m and the use of the PC command and $\overline{L} = \dfrac{L_m}{L_{av}}$ is the normalized measured amplitude.

6) (currently amended) ~~Method~~ The method ~~for use in controlling the emission power~~ according to claim 1, wherein said power control command signal ~~(PC)~~ is determined ~~given~~ by the following equation ~~scheme~~:

$$PC(t_d)=\begin{cases} 1/L_m & \text{if } t_d \prec \dfrac{\lambda * \min\left(\overline{L},\dfrac{1}{\overline{L}}\right)}{\sqrt{2\pi v}} \\ 1/L_{av} & \text{if } t_d \geq \dfrac{\lambda * \min\left(\overline{L},\dfrac{1}{\overline{L}}\right)}{\sqrt{2\pi v}} \end{cases}$$

where PC(t_d) is the power control command which will be used at the present time (assumed to zero) + t_d, L_m is the measured amplitude, L_{av} is the short-term average of the measured amplitude, t_d is the time delay between the moment of the measurement of the measured amplitude L_m and the use of the *PC* command and $\overline{L}=\dfrac{L_m}{L_{av}}$ is the normalized measured amplitude.

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7) (currently amended) ~~Apparatus in a transceiver (10, 20) in a communication system arranged~~ ~~for use in carrying out the method of one of the preceding claims, said~~ An apparatus comprising:

~~including~~ an evaluating unit ~~(200)~~ for evaluating a power command ~~(PC)~~ based on a ~~basis of the~~ signal received by a ~~the~~ transceiver; ~~(10, 20)~~ and

a transmission unit ~~(210)~~ ~~provided~~ ~~to transmit~~ for transmitting signals with a power ~~(P)~~ corresponding to the power command ~~(PC)~~,

wherein the evaluating unit ~~(200~~) includes an estimation unit ~~(23)~~ for estimating a ~~the~~ fast fading duration of the signal received by the transceiver and a control unit ~~(24)~~ for determining the power command ~~(PC)~~ based on ~~basis of~~ the fast fading duration estimation made by the unit ~~(23)~~.

8) (currently amended) ~~Apparatus~~ The apparatus according to claim 7, wherein the control unit ~~(24)~~ ~~is provided to compare~~ compares the evaluated fast fading duration with a ~~the~~ time duration between the amplitude or the power measurement and an ~~the~~ emission power setting, and ~~in determining~~ determines said power control command ~~(PC)~~ according to a ~~the~~ result of said comparison.

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9) (currently amended) The apparatus according to claim 8, wherein ~~it has~~ further comprising:

a measurement unit ~~(12)~~ for measuring the amplitude or the power of the received signal and averaging unit and ~~(22)~~ for determining the short-term average of the measured amplitude or power,

wherein the control unit ~~(24)~~ ~~being provided to~~ sets the power control command ~~(PC)~~ at the inverse of the measured amplitude

~~(1/L_m)~~ if the fading duration is higher than the time duration between the amplitude or power measurement and the emission power setting and at the inverse of the average of the measured amplitude if it is equal to or lower than said time duration. [[:]]

$$\cancel{PC(t_d) = \begin{cases} 1/L_m & if\ t_f > t_d \\ 1/L_{av} & if\ t_f \le t_d \end{cases}}$$

10) (currently amended) The apparatus according to claim 7, wherein the estimation unit ~~(23)~~ ~~is provided to~~ evaluates the fading duration by ~~means of~~ the following equation:

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$$t_f = \begin{cases} (a) \quad \frac{\lambda}{\sqrt{2\pi}\bar{L}v}\left[e^{\left(\bar{L}^2\right)}-1\right] & if\ \bar{L} \prec 1 \\ (b) \quad \frac{\lambda}{\sqrt{2\pi}\bar{L}v}\left[e^{\left(\bar{L}^2\right)}-1\right] & if\ \bar{L} \ge 1 \end{cases}$$

where $\bar{L}$ is the received amplitude L_m at a measurement time normalized by the short-term average amplitude L_{av} ($\bar{L} = L_m L_{av}$), ν and λ are respectively the speed of the ~~said~~ transceiver ~~(20)~~ relative to the other transceiver ~~(10)~~ and the wavelength of the carrier used by the communication system.

11) (currently amended) The apparatus according to claim 7 ~~one of the preceding claims~~, wherein said power control command signal

~~(PC)~~ delivered by the control unit ~~(24)~~ is determine ~~given~~ by the following equation ~~scheme~~:

$$PC\,(t_d) = \begin{cases} 1/L_m \begin{cases} \text{if } \;\overline{L} \prec 1 \text{ and } t_d \prec \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v}\left[e^{(\overline{L}^2)} - 1\right] \\ \text{if } \;\overline{L} \geq 1 \text{ and } t_d \prec \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v} \end{cases} \\ 1/L_{av} \begin{cases} \text{if } \;\overline{L} \prec 1 \text{ and } t_d \geq \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v}\left[e^{(\overline{L}^2)} - 1\right] \\ \text{if } \;\overline{L} \geq 1 \text{ and } t_d \geq \dfrac{\lambda}{\sqrt{2\pi}\,\overline{L}\,v} \end{cases} \end{cases}$$

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where PC(t_d) is the power control command signal which will be used at the present time (assumed to zero) + t_d, L_m *is* the measured amplitude, L_{av} *is* the short-term average of the measured amplitude, t_d is the time delay between the moment of the measurement of the measured amplitude L_m, and the use of the *PC* command and $\overline{L} = \dfrac{L_m}{L_{av}}$ is the normalized measured amplitude.

12) (currently amended) The apparatus according to claim 7, wherein said power control command signal ~~(PC)~~ delivered by the control unit (24) is determine ~~given~~ by the following equation ~~scheme~~:

$$PC(t_d) = \begin{cases} 1/L_m & \text{if } t_d \prec \dfrac{\lambda * \min\left(\overline{L}, \dfrac{1}{\overline{L}}\right)}{\sqrt{2\pi}v} \\ 1/L_{av} & \text{if } t_d \geq \dfrac{\lambda * \min\left(\overline{L}, \dfrac{1}{\overline{L}}\right)}{\sqrt{2\pi}v} \end{cases}$$

where $PC(t_d)$ is the power control command which will be used at the present time (assumed to zero) + t_d, L_m is the measured amplitude, L_{av} is the short-term average of the measured amplitude, t_d is the time delay between the moment of the measurement of the measured amplitude L_m and the use of the PC command and $\overline{L} = \frac{L_m}{L_{av}}$ is the normalized measured amplitude.

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